

IN THE CLAIMS:

Please amend the claims as follows:

1.(Original) A method of deinking printed paper, the method comprising pulping the paper to form an aqueous slurry, adding a deinking additive to the paper, and removing detached ink by flotation, wherein the additive comprises an organo-modified siloxane comprising units of the formula:



in which each R^1 is independently selected from the group consisting of a hydrogen atom, an alkyl, aryl, alkenyl, aralkyl, alkaryl, alkoxy, alkanoyloxy, hydroxyl, ester ~~or~~ and ether group;

each Z is independently selected from the group consisting of (i) an alkyl group substituted with a substituent selected from the group consisting of an amine, amide, carboxyl, ester, or epoxy group, ~~or~~ and (ii) a group $-R^2-(OC_pH_{2p})_q(OC_rH_{2r})_s-R^3$;

n is an integer greater than 1;

a and b are independently selected from the group consisting of 0, 1, 2 ~~or~~ and 3;

R^2 is selected from the group consisting of an alkylene group ~~or~~ and a direct bond;

R^3 is selected from the group consisting of ~~a group as defined for R^1 or and Z as defined~~ above;

p and r are each independently an integer from 1 to 6;

q and s are independently selected from the group consisting of 0 ~~or~~ and an integer such that

$1 \leq q + s \leq 400$;

and wherein each molecule of the organo-modified siloxane contains at least one group Z.

2.(Original) A method according to claim 1 wherein Z is a group $-R^2-(OC_pH_{2p})_q(OC_rH_{2r})_s-R^3$.

3.(Currently Amended) A method according to claim 2 wherein p ~~and/or r~~ are ~~independently 2, 3 or 4~~ an integer from 2 to 4 inclusive.

4.(Currently Amended) A method according to claim 2 ~~or 3~~ wherein q and s are each independently integers from 10 to 30.

5.(Currently Amended) A method according to claim 4 wherein q and s are each independently integers from 15 to 25.

6.(Currently Amended) A method according to ~~any one of~~ claims 2 ~~to 5~~ wherein p is 2, r is 3, and q and s are both 18.

7.(Currently Amended) A method according to ~~any preceding~~ claim 1 wherein R^2 is selected from the group consisting of a methylene, ethylene, propylene, butylene, pentylene ~~or~~ and hexylene group.

8.(Currently Amended) A method according to ~~any preceding~~ claim 1 wherein R^3 is selected from the group consisting of a hydrogen atom ~~or~~ and a hydroxyl group.

9.(Currently Amended) A method according to ~~any preceding~~ claim 1 wherein the siloxane is linear.

10.(Currently Amended) A method according to ~~any preceding~~ claim 1 wherein the siloxane contains branching.

11.(Currently Amended) A method according to ~~any preceding~~ claim 1 wherein Z is a group $-R^2-(OC_pH_{2p})_q(OC_rH_{2r})_s-R^3$, and R^3 is selected from the group consisting of a hydroxyl ~~or~~ and an alkanoyloxy group.

12.(Currently Amended) A method according to ~~any preceding~~ claim 1 wherein 2 to 20 mole percent of silicon atoms in the siloxane molecule are substituted by a group Z.

13.(Original) A method according to claim 12 wherein 5 to 16 mole percent of silicon atoms in the siloxane molecule are substituted by a group Z.

14.(Currently Amended) A method according to ~~any preceding~~ claim 1 wherein the siloxane has a hydrophilic/lipophilic balance (HLB) in the range of about 5.0 to about 7.3.

15.(Currently Amended) A method according to ~~any preceding~~ claim 1 wherein the siloxane has a molecular weight in the range of about 1,000 to about 500,000.

16.(Currently Amended) A method according to claim 15 wherein the siloxane has a molecular weight in the range of about 10,000 to about 100,000.

17.(Currently Amended) A method according to ~~any preceding~~ claim 1 wherein the siloxane is a hydroxy-endcapped linear polydimethylsiloxane having an HLB of about 5.9 to about 6.3, in which 10 to 12 mole percent of silicon atoms are substituted by Z groups of the formula

$-R^2-(OC_pH_{2p})_q(OC_rH_{2r})_s-R^3$, in which p is 2, r is 3 and q and s are both 18, R^2 is selected from the group consisting of an alkylene group having from 1 to 6 carbon atoms ~~or~~ and a direct bond, and R^3 is selected from the group consisting of a hydrogen atom ~~or~~, a hydroxyl, ester ~~or~~ and ether group.

18.(Currently Amended) A method according to ~~any preceding~~ claim 1 wherein the additive further comprises one or more components selected from the group consisting of a polydimethylsiloxane, an organic polyether, and a fatty acid.

19.(Currently Amended) A method according to claim 18 wherein the additive further comprises an organic polyether of the formula

$R^4-(OC_pH_{2p})_q(OC_rH_{2r})_s-R^5$ in which R^4 and R^5 are selected from the group consisting of a hydrogen atom, hydroxyl, alkyl and alkoxy groups, p and r are independently an integer from 1 to 6, and q and s are independently selected from the group consisting of 0 ~~or~~ and an integer such that $1 \leq q + s \leq 400$.

20.(Currently Amended) A method according to claim 18 ~~or 19~~ wherein the additive further comprises a fatty acid ~~which is a~~ selected from the group consisting of a saturated ~~or~~ and unsaturated monobasic aliphatic carboxylic acid.

21.(Currently Amended) A method according to claim 20 wherein the carboxylic acid is selected from the group consisting of lauric, myristic, palmitic, stearic, arachidic, behenic, lignoceric, palmitolic, oleic, linoleic, linolenic, and arachidonic acids.

22.(Currently Amended) A method according to ~~any preceding~~ claim 1 wherein the additive is an emulsion.

23.(Original) A method according to claim 22 wherein the additive is a gum based self-emulsifying siloxane.

24.(Currently Amended) A method according to ~~any preceding~~ claim 1 wherein the additive is added to the paper in an amount within the range 0.1 to 1 wt% of the paper.

25.(Original) A method according to claim 24 wherein the additive is added to the paper in an amount within the range 0.1 to 0.5 wt% of the paper.

26.(Currently Amended) A method according to ~~any preceding~~ claim 1 which is performed at substantially neutral pH.

27.(Currently Amended) A method according to ~~any preceding~~ claim 1 wherein the additive is added to the paper at a stage selected from the group consisting of before, during ~~or~~ and after pulping.

28.(New) A method according to claim 2 wherein r is an integer from 2 to 4 inclusive.

29.(New) A method according to claim 2 wherein both p and r are each independently an integer from 2 to 4 inclusive.